Instruction Manual

PerfectBlue™
Horizontal Maxigelsystems

Maxi S, M, L, ExW, Maxi M 'Revolution' &
Maxi ExW 'Revolution'

peqlab Biotechnologie GmbH

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WARRANTY

PEQLAB guarantees that the horizontal electrophoresis system you have received has been thoroughly tested and meets its published specification.

However, immediately upon arrival, please check carefully that the shipment is complete and has not been damaged in transit. For missing parts or to report any kind of damage, please contact PEQLAB (see 'TECHNICAL SUPPORT AND ORDERING INFORMATIONS'). Please retain all packaging materials until the delivery has been completely checked since this will speed up the return of goods if required and reduce environmental impact. Any form of returns, replacements or credit notes must be agreed in advance by PEQLAB.

For the complete range of PerfectBlue™ electrophoresis and blotting systems, PEQLAB guarantees a warranty period of 36 months if the products have been used solely according to the instruction manual and if not agreed differently. After the warranty period has expired PEQLAB can offer repairs at low costs. No liability is accepted for loss or damage arising from incorrect use. PEQLAB's liability is limited to the repair or replacement of the unit or refund of the purchase price, at PEQLAB's discretion. PEQLAB is not liable for any consequential damages.

PEQLAB reserves the right to alter the technical specifications of the PerfectBlue™ electrophoresis or blotting systems without prior notice. This will enable us to implement developments as soon as they arise.

PACKAGING LIST

Unless differently agreed or marked on the delivery note the following items are included in shipment for the models Maxi S, Maxi M, Maxi M 'Revolution', Maxi L, Maxi ExW and Maxi ExW 'Revolution':

- one buffer chamber with corrosion-protected platinum electrodes
- one safety lid with attached power cords
- one UV-transmissible gel tray and two End Gates
- one casting chamber
- Maxi S: 3 combs, 1.5 mm thick, 12, 16 and 20 teeth
- Maxi M ('Revolution'): 3 combs, 1.5 mm thick, 16, 24 and 36 teeth
- Maxi L: 4 combs, 1.5 mm tick, 2 each 25 and 50 teeth
- Maxi ExW (including 'Revolution' model): 4 combs, 1.5 mm thick, 2 each 25 and 50 teeth
- User Manual

SAFETY PRECAUTIONS

- Please, read this Instruction Manual carefully before using the gel system.
- Only use a CE marked DC power supply.
- Always disconnect the gel system from the power supply before adding electrophoresis buffer.
- Always disconnect the gel system from the power supply when it is not in use or before moving it.
- Running conditions for this unit should not exceed the maximum operating voltage or current.
- Do not fill the chamber with running buffer above the maximum fill line.

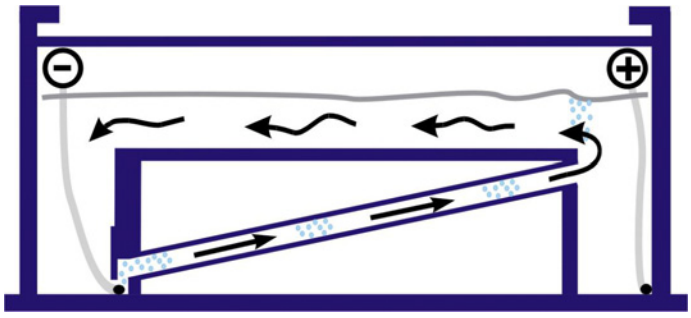
SYSTEM OVERVIEW

The horizontal electrophoresis systems PerfectBlue™ Maxi S, Maxi M ('Revolution'), Maxi L and Maxi ExW ('Revolution') are designed for the separation of medium to high sample numbers at long distances and provide flat, even banding patterns and consistent results. Their gel trays are getting sealed leak proof inside the chamber by using End Gates included in delivery. The gasketed End Gates are specifically engineered to fit accurately into the gel tray grooves eliminating the need to tape or seal the tray before pouring gels. Utilizing the built-in levelling feature in all of the horizontal Maxigelsystems allows the user to cast level gels quickly. Four gel sizes are available to provide maximum versatility; increasing sample capacity and varying sample running length. Depending on the specific model the UV-transmissible gel trays are equipped with 4 to 12 comb slots so that you can run multiple sample sets to equal distances simultaneously.

PEQLAB offers a wide variety of standard and microtiter combs in two different thicknesses (1 mm or 1.5 mm). Microtiter combs allow for speedy sample loading using a multichannel pipette. Furthermore preparative combs for large sample volumes and wall combs to cast gels in smaller sizes are available for increased versatility. For deviding up the gel tray wall combs are put in the gel tray's slots instead of a common comb but should get sealed using agarose of higher percentage before casting the gel.

For detailed information on available accessories visit www.peqlab.de or see 'TECHNICAL SUPPORT AND ORDERING INFORMATIONS'.

The Maxi M 'Revolution' and Maxi ExW 'Revolution' models are equipped with an internal buffer recirculation system. A trapping system captures hydrogen bubbles which are produced at the cathode due to electrolysis, and directs them through an ascending tube to the opposing side of the buffer chamber where the anode is located. During this hydrogen bubble migration, the buffer circulates, preventing the creation of detrimental pH or ion gradients.



Schematic drawing: 'Revolution'-Technology

Technical properties

PerfectBlue™	Cat. No.	Gel size (W x L)	Buffer volume	Voltage	Current	Time required
Maxi S	41-1325	13 x 25 cm	1600 ml	20-250 V	0-150 mA	60-120 min
Maxi M	41-2025	20 x 25 cm	2300 ml	20-250 V	0-150 mA	60-240 min
Maxi M 'Revolution'	41-2025R	20 x 25 cm	2000 ml	20-250 V	0-150 mA	60-360 min
Maxi L	41-2340	23 x 40 cm	4500 ml	20-250 V	0-150 mA	60-360 min
Maxi ExW	41-2325	23 x 25 cm	3000 ml	20-250 V	0-150 mA	60-240 min
Maxi ExW 'Revolution'	41-2325R	23 x 25 cm	2800 ml	20-250 V	0-150 mA	60-360 min

GENERAL INSTRUCTIONS

Setting up the system and pouring the agarose gel

1. Remove the lid from the gel box by holding the front of the buffer chamber with one hand and pulling the lid off by holding the center of the back of the lid. The cover is attached to the back of the unit at the connection of the power cords to the banana plugs.

2. For convenient storage, the gel tray should be placed inside the unit on the platform with the gasketed End Gates in position. Lift the casting tray out of the buffer chamber.

3. To cast a gel, place the gel tray into the chamber making sure the gel tray rests level and is centered on the platform. Slide the gasketed End Gates into the outermost grooves on either side of the gel tray. The End Gates should be inserted tightly into the grooves with the gasket side facing out.

4. The larger size of the gel makes the need to cast and run a level gel very important for consistent reproducible results. Level the unit using the thumbscrews on each side of the unit by slowly turning one thumbscrew at a time and lining up the bubble in the level with the center circle.

5. When preparing the gel use electrophoresis-grade agarose and compatible electrophoresis buffer. The gel may be prepared in various ways. The percentage of agarose and the buffer used is determined by the size of the samples to be separated and further recovery of the samples (see 'REQUIRED REAGENTS & RECIPES'). The agarose and buffer are mixed and heated over a heat plate by stirring or in a microwave oven until the agarose is completely dissolved.

6. The prepared gel then must be cooled to below 60 °C before casting to avoid warping the UVT gel tray due to excessive heat. If numerous gels are to be run in one day, a large volume of gel may be prepared and be placed in a covered bottle stored between 40-60 °C in a water bath. This provides a ready gel supply in a warm liquid form that will solidify quickly when gels are cast.

7. Pour or pipet the measured amount (see 'Agarose: Gel volumes and percentage') of warm agarose (< 60 °C) onto the UVT gel tray that has been placed into the correct position in the gel box. Immediately after pouring, insert the desired comb or combs into the comb slots to form the sample wells. If only a small portion of gel is required for proper sample separation, multiple combs may be used to run 2, 3, 4, 5 or 10 sets (depending on the model) of samples for equal distances simultaneously, increasing the number of samples that may be run per gel. To conserve agarose, a wall comb may also be used to divide and use just half the length of the gel tray. If a wall comb is used, pipet a bead of agarose along the bottom and side edges of the wall comb once it has been placed in the tray to seal the combs edges to the trays bottom and sides. Once this bead is solidified the cooled gel may be poured as described. Alternately, regular tape cut slightly longer then the comb can be placed flat along the comb's surface and the comb angled into place in the gel tray. Extra tape is then placed on the outside of the comb in the excess tray area to reinforce the corners.

   NOTE: Allow the gel to solidify completely. Standard agarose should solidify completely in about 30 minutes. If low melting agarose or a speciality agarose is used, please consult the instructions that came with the product.

Loading of samples and electrophoresis

1. Once the gel is completely solidified, carefully lift the tray out of the chamber as described above and place it beside the unit.

2. Pour enough compatible running buffer into the unit to fill both compartments and allow it to stand for about 15 minutes prior to running. Fill the chamber at the cathode end (black electrode) first.

3. Then put the gel tray into the chamber, remove the End Gates and completely cover and submerge the gel. The running position of the tray exposes the open ends of the agarose to the buffer. A 'Fill Line' is located on each unit to clearly mark the correct buffer level. Too little buffer may cause the gel to dry out during the run, while excess buffer may slow DNA migration in the gel and band distortion.

4. Carefully remove the comb (or combs) by tapping lightly to loosen, and slowly lift straight up out of the gel tray to avoid damage to the wells.

5. Load prepared samples into the wells. Samples should be mixed with a sample loading buffer, that gives weight to the samples so that they drop evenly into the wells, and that contains tracking dyes to monitor the gel run. Refer to 'TECHNICAL SUPPORT AND ORDERING INFORMATIONS' for approximate well volumes.

   NOTE: It is wise to always run a sample lane of a known 'standard ladder' to determine concentration and size of separated fragments after the gel run, and to aid in photo documentation and analysis.

6. Carefully slide the lid with attached power cords onto the unit. This will connect the power cords to the banana plug to complete the circuit. Plug other end of the power cords into an appropriate power supply.

7. Turn on the power supply and run the gel at the appropriate current (see 'Technical properties'). Carefully monitor the gel run to avoid samples running into the path of another set of samples.

Visualisation

When the gel run is completed and the tracking dye has migrated as far through the gel as desired or to the end of the gel, turn off the power supply and slide off the lid to disconnect from the power source. Carefully remove the tray containing the gel (wear gloves if ethidium bromide is present). The UV-transmissible gel tray makes for simple visualisation and photography with a UV light source without the need to remove the gel from the tray. The gel tray may be placed back into the casting chamber for convenient transport to the darkroom and to avoid damage to the gel.

Cleaning

The buffer chamber and tray should be rinsed under warm running water after each use. Use a mild detergent to get rid of any debris. It is recommended to allow the chamber to air dry rather than drying with a towel to avoid damage to the electrode wires.
Do not use ethanol or other organic solvents to clean acrylic products, because organic solvents cause acrylic to 'craze' or crack!

REQUIRED REAGENTS & RECIPES

Electrophoresis buffers

In general, electrophoresis buffers supply the ions necessary for electrophoresis and establishing a certain pH value in which the target molecule adapts to its the required electric charge. Nucleic acids for example will be negatively charged in an alkaline to neutral surrounding. Additionally, electrophoresis buffers often contain reagents which protect the target molecule from degradation (e.g. EDTA, which complexes bivalent cations and therefore inhibits DNases). If electrophoresis under denaturing conditions is desired (like for the electrophoresis of RNA), electrophoresis buffers will additionally contain reagents that eliminate the formation of secondary structures.
Below, you will find recipes for TAE and TBE, two of the most commonly used buffers for the electrophoresis of DNA. If the intention is to eventually isolate DNA from the gel, TAE buffer should be chosen. In comparison to TBE, migration will be faster and a better resolution of supercoiled DNA will be achieved when using TAE. However, because of TAE's limited buffering capacity, TBE should be selected for performing extended electrophoresis separations and if the electrophoresis chamber does not possess a system for buffer recirculation. PEQLAB's PerfectBlue 'Revolution' Systems are equipped with such an internal buffer recirculation system which effectively prevents the formation of pH and ion gradients during extended runs. Since agarose tends to create finer pore sizes and a more solid matrix in TBE, diffusion of DNA will be reduced and a more discrete band pattern will be achieved.

TAE (Tris-Acetate-EDTA) Buffer

1x working solution:	40 mM Tris-acetate, 1 mM EDTA
50x stock solution (1 l):	242 g Tris-Base 57.1 ml Glacial acetic acid 100 ml 0.5 M EDTA (pH 8.0) made up to 1 l using H_2O

TBE (Tris-Borate-EDTA) Buffer

0.5 x working solution*:	45 mM Tris-Borat, 1 mM EDTA
5x stock solution (1 l)**:	54 g Tris-Base 27.5 g Boric acid 20 ml 0.5 M EDTA (pH 8.0) made up to 1 l using H_2O

* 0.5x TBE is sufficient for agarose gel electrophoresis. For vertical electrophoresis in polyacrylamide gels, 1x TBE is often applied due to the comparatively smaller buffer reservoirs of vertical electrophoresis chambers.

** 5x TBE stock solutions tend to precipitate during long storage periods and should get remade. Because of this property, higher concentrations of TBE stock solutions should be avoided.

Agarose: Gel volumes and percentage

PEQLAB offers an extensive range of high quality agaroses, for many specific applications (see 'TECHNICAL SUPPORT AND ORDERING INFORMATIONS').

The required volume of the gel is calculated using the following formula.

gel width (cm) x gel length (cm) x gel thickness (cm) = required volume agarose solution (ml)

The following volumes will result:

PerfectBlue™	Gel size (cm)	Gel thickness (cm)			
		0.25	0.5	0.75	1.0
Maxi S	13 x 25 (B x L)	81 ml	162 ml	243 ml	325 ml
Maxi M	20 x 25 (B x L)	125 ml	250 ml	375 ml	500 ml
Maxi M 'Revolution'	20 x 25 (B x L)	125 ml	250 ml	375 ml	500 ml
Maxi L	23 x 40 (B x L)	230 ml	460 ml	690 ml	920 ml
Maxi ExW	23 x 25 (B x L)	144 ml	288 ml	432 ml	575 ml
Maxi ExW 'Revolution'	23 x 25 (B x L)	144 ml	288 ml	432 ml	575 ml

The optimal range of DNA fragment sizes separated by any electrophoresis experiment is dependent on the agarose concentration of the gel. The higher the agarose concentration, the better small fragments are separated from each other and vice versa. However, for the smallest or largest fragment lengths, the usage of specialized agaroses or polyacrylamide gels should be considered (see table below), since a 3% agarose solution solidifies rapidly and a 0.3% agarose gel is very soft and difficult to handle.

Agarose content (w/v)	Agarose (g)	Puffer (ml)	optimal separation range (kb)
0.3%	0.3	100	5-30
0.5%	0.5	100	1-15
0.7%	0.7	100	0.8-10
1.0%	1.0	100	0.5-7
1.2%	1.2	100	0.3-6
1.5%	1.5	100	0.2-4
2.0%	2.0	100	0.1-3
3.0%	3.0	100	<0.1

Ethidium bromide

The gel may be stained during or following the run with a variety of stains for photodocumentation. The most common stain for DNA is ethidium bromide. Because of its capacity to intercalate between the bases of a nucleic acid strand and altering the sterical properties of DNA, ethidium bromide is judged to be highly mutagenic. Therefore appropriate safety measures must be applied.
Ethidium bromide may be added directly to the gel before pouring it at a concentration of 0.1 to 0.5 µg/ml. However, being positively charged, ethidium bromide will migrate to the cathode during the electrophoresis leading to non-homogeneous staining. Improved results can be obtained by incubating the gel after the electrophoresis is finished in electrophoresis buffer containing 0.5 µg/ml ethidium bromide for 5 to 20 min. Subsequently the gel should get rinsed in electrophoresis buffer without ethidium bromide for up to 20 min in order to reduce background signal.

Loading buffer/Sample buffer

Samples are prepared and mixed with loading buffer before applying to the prepared gel. Sample buffers contain dyes for visibility and glycerol to provide weight to the samples. This increased sample density ensures samples load evenly into the wells and do not float out during loading. Dyes also migrate toward the anode end of the electrophoresis chamber at predictable rates allowing the gel run to be monitored. In 0.5x TBE gels, bromophenol blue migrates at the same rate as 300 bp DNA fragments and xylene cyanol approximately at the same rate as 4 kbp DNA fragments.

6x DNA sample buffer: 0.25 % (w/v) bromophenol blue
0.25 % (w/v) xylene cyanol FF
30 % (v/v) glycerol

Molecular weight marker

Markers are run on each gel to monitor the quality of sample separation and to enable a size estimation of specific bands. By running a known marker of a specific concentration in parallel, the DNA amount of the unknown samples can be estimated. PEQLAB offers an extensive range of DNA and RNA markers. For detailed information please contact us or visit www.peqlab.de.

TROUBLESHOOTING

Some possible solutions to potential problems are listed below. If these suggestions are unclear or unsuccessful, please contact PEQLAB.

Problem: Agarose leaks into casting chamber when pouring gel
Check to see if the gasket is firmly seated in the grooves on the ends of the UVT gel tray. Reseat gasket if necessary by removing and rinsing under warm running water, then reseat evenly in the tray groove.

Problem: Bands seem to be running at an angle (Gel smiling).
Check to be sure the casting is being done on a level surface. Also confirm that the gel tray is inserted all the way into the unit and rests on the platform for level gel casting. The voltage may be too high. Try lowering the voltage setting on the power supply.

Problem: Samples seem to be running unevenly in certain areas.
Check that the platinum electrode wire is intact and running evenly across the base of the chamber and up the side to the junction of the banana plug. If there appears to be a break in the electrode connection contact PEQLAB immediately. This problem may also be caused by regularly casting with very hot agarose gel (>60 °C). Always cool the melted agarose to below 60 °C before casting to avoid warping the UVT gel tray. Warping the gel tray will cause all subsequent gels to be cast unevenly.

Problem: Samples do not band sharply and appear diffuse in the gel.
Gels should be no more than 5 mm thick and be allowed to solidify completely before running. Standard agarose should solidify in about 30 minutes. If low melting point agarose is used, it may be necessary to completely solidify gels at a cooler temperature in the refrigerator or cold room. Gels should be submerged in 3-5 mm of buffer to avoid gel dry out, but excess buffer (>5 mm) can cause decreased DNA mobility and band distortion.

Problem: Samples are not moving as expected through the gel, remaining in the wells, running 'backwards' or diffusing into the gel.
Check to be sure that a complete power circuit is achieved between the unit and the power supply. Platinum wire and banana plugs should be intact. To test, simply fill the unit with running buffer and attach to the power supply without a gel or gel tray in the unit. The platinum wires on both sides of the unit should produce small bubbles as the current passes through. If a complete circuit does not exist there will be little to no bubbles. If samples appear to run backwards through the gel or there are no bands visible, check to be sure that the gel tray was placed in the electrophoresis chamber in the proper orientation. If the orientation or polarity is reversed, the samples will run backwards or migrate off the gel. The tray should be placed in the chamber with the comb at the edge of the tray closest to the cathode side of the chamber.

Problem: When the comb is removed from the gel the sample well is ripped and damaged.
Always make sure to allow the gel to solidify completely before moving the tray, unit, or removing the comb. To avoid damage to the sample wells, gently rock the comb back and forth lightly to loosen, and then slowly pull the comb straight up out of the gel tray. This rocking helps to avoid suction as the comb is removed. Alternatively, once casting is complete and the gel tray is placed in the running orientation, simply submerge the gel in running buffer to help loosen the comb.

Problem: The gel seems to run slower under the usual running conditions.
The volume of running buffer used to submerge the gel should only be between 3-5 mm over the gel surface. Gel should be completely submerged to avoid the gel from drying out, which can smear the bands and possibly melt the gel due to overheating. If excessive running buffer is added the mobility of the DNA decreases and band distortion may result. Excess buffer causes heat to build up and buffer condensation inside the unit may result.

TECHNICAL SUPPORT AND ORDERING INFORMATIONS

For technical questions please contact us by phone (+49 (0)9131 610 7020) or e-mail (info@peqlab.de). Please find detailed information on PEQLAB's products on www.peqlab.deT.

PerfectBlue™ Maxi S

Item	Description			Cat. No.
Gel system Maxi S	complete system for gels 13 x 25 cm (W x L)			41-1325
Gel tray	UV-transmissible gel tray and End Gates			41-1325-UVT
Gaskets	2 rubber gaskets for End Gates			41-1325-GK
End Gates	2 End Gates incl. gaskets for gel tray sealing			41-1325-EG
Wall comb	Wall comb for dividing up the gel tray			41-1325-WC
Standard combs	1.5 mm	8 teeth	78 µl*	41-1325-8D
	1.5 mm	12 teeth	49 µl*	41-1325-12D
	1.5 mm	16 teeth	34 µl*	41-1325-16D
	1.5 mm	20 teeth	25 µl*	41-1325-20D
	1.5 mm	24 teeth	20 µl*	41-1325-24D
	1.0 mm	8 teeth	52 µl*	41-1325-8C
	1.0 mm	12 teeth	33 µl*	41-1325-12C
	1.0 mm	16 teeth	23 µl*	41-1325-16C
	1.0 mm	20 teeth	17 µl*	41-1325-20C
	1.0 mm	24 teeth	13 µl*	41-1325-24C
Microtiter combs	1.5 mm	14 teeth	35 µl*	41-1325-MTD
	1.5 mm	28 teeth	16 µl*	41-1325-28D
	1.0 mm	14 teeth	25 µl*	41-1325-MTC
	1.0 mm	28 teeth	11 µl*	41-1325-28C
Preparative comb	1.5 mm	2 teeth	658/28 µl*	41-1325-PD

* volumes are calculated for a gel thickness of 5 mm

PerfectBlue™ Maxi M & Maxi M 'Revolution'

The same accessories are used for the models Maxi M and Maxi M 'Revolution'.

Item	Description			Cat. No.
Gel system Maxi M	complete system for gels 20 x 25 cm (W x L)			41-2025
Gelsystem Maxi M 'Revolution'	complete system for gels 20 x 25 cm (W x L)			41-2025R
Gel tray	UV-transmissible gel tray and End Gates			41-2025-UVT
Gaskets	2 rubber gaskets for End Gates			41-2025-GK
End Gates	2 End Gates incl. gaskets for gel tray sealing			41-2025-EG
Wall comb	Wall comb for dividing up the gel tray			41-2025-WC
Standard combs	1.5 mm	8 teeth	127 µl*	41-2025-8D
	1.5 mm	12 teeth	82 µl*	41-2025-12D
	1.5 mm	16 teeth	59 µl*	41-2025-16D
	1.5 mm	20 teeth	45 µl*	41-2025-20D
	1.5 mm	24 teeth	37 µl*	41-2025-24D
	1.5 mm	28 teeth	28 µl*	41-2025-28D
	1.5 mm	32 teeth	22 µl*	41-2025-32D
	1.5 mm	36 teeth	20 µl*	41-2025-36D

Standard combs (continued)	1.0 mm	8 teeth	85 µl*	41-2025-8C
	1.0 mm	12 teeth	54 µl*	41-2025-12C
	1.0 mm	16 teeth	39 µl*	41-2025-16C
	1.0 mm	20 teeth	30 µl*	41-2025-20C
	1.0 mm	24 teeth	24 µl*	41-2025-24C
	1.0 mm	28 teeth	19 µl*	41-2025-28C
	1.0 mm	32 teeth	15 µl*	41-2025-32C
	1.0 mm	36 teeth	13 µl*	41-2025-36C
Microtiter combs	1.5 mm	18 teeth	40 µl*	41-2025-18D
	1.5 mm	21 teeth	40 µl*	41-2025-MTD
	1.5 mm	42 teeth	16 µl*	41-2025-MT2D
	1.0 mm	18 teeth	27 µl*	41-2025-18C
	1.0 mm	21 teeth	27 µl*	41-2025-MTC
	1.0 mm	42 teeth	11 µl*	41-2025-MT2C
Preparative combs	1.5 mm	2 teeth	1052/28 µl*	41-2025-PD

* volumes are calculated for a gel thickness of 5 mm

PerfectBlue™ Maxi L

Item	Description			Cat. No.
Gel system Maxi L	complete system for gels 23 x 40 cm (W x L)			41-2340
Gel tray	UV-transmissible gel tray and End Gates			41-2340-UVT
Gaskets	2 rubber gaskets for End Gates			41-2340-GK
End Gates	2 End Gates incl. gaskets for gel tray sealing			41-2340-EG
Wall comb	Wall comb for dividing up the gel tray			40-2314-WC
Microtiter combs	1.5 mm	25 teeth	40 µl*	40-2314-MTD
	1.5 mm	26 teeth	40 µl*	40-2314-26D
	1.5 mm	50 teeth	16 µl*	40-2314-MT2D
	1.0 mm	25 teeth	27 µl*	40-2314-MTC
	1.0 mm	26 teeth	27 µl*	40-2314-26C
	1.0 mm	50 teeth	11 µl*	40-2314-MT2C

* volumes are calculated for a gel thickness of 5 mm

PerfectBlue™ Maxi ExW & Maxi ExW 'Revolution'

The same accessories are used for the models Maxi ExW and Maxi ExW 'Revolution'.

Item	Description			Cat. No.
Gelsystem Maxi ExW	complete system for gels 23 x 25 cm (W x L)			41-2325
Gelsystem Maxi ExW 'Revolution'	complete system for gels 23 x 25 cm (W x L)			41-2325R
Gel tray	UV-transmissible gel tray and End Gates			41-2325-UVT
Gaskets	2 rubber gaskets for End Gates			41-2340-GK
End Gates	2 End Gates incl. gaskets for gel tray sealing			41-2340-EG
Wall comb	Wall comb for dividing up the gel tray			40-2314-WC
Microtiter combs	1.5 mm	25 teeth	40 µl*	40-2314-MTD
	1.5 mm	26 teeth	40 µl*	40-2314-26D
	1.5 mm	50 teeth	16 µl*	40-2314-MT2D
	1.0 mm	25 teeth	27 µl*	40-2314-MTC
	1.0 mm	26 teeth	27 µl*	40-2314-26C
	1.0 mm	50 teeth	11 µl*	40-2314-MT2C

* volumes are calculated for a gel thickness of 5 mm

Power Supplies

Do not hesitate to contact us for advice on which Power Supply is most suitable for your application.

Item	Ports	max. Voltage (V)	max. Current (mA)	Power (W)	Cat. No.
EV222	3	200	200	20	55-EV222
EV243	3	400	300	50	55-EV243
EV231	4	300	1000	150	55-EV231
EV265	4	600	500	150	55-EV265
EV202	4	300	2000	300	55-EV202
EV261	4	600	1000	300	55-EV261
EV215	4	1200	500	300	55-EV215
EV232	4	3000	150	150	55-EV232
EV233	4	3000	300	300	55-EV233
EV262	4	6000	150	300	55-EV262

Agaroses

Item	Purpose	Amount	Cat. No.
peqGOLD Universal-Agarose	Suitable for standard applications. Separation range between 0.05 and 50 kb.	100 g 500 g 1000 g	35-1010 35-1020 35-1030
peqGOLD Universal-Agarose Tabs	Convenient tablet format. Suitable for standard applications. Separation range between 0.05 and 50 kb.	50 g 250 g 500 g	35-7010 35-7020 35-7030
peqGOLD 'Low Melt'-Agarose	For the preparative separation of DNA fragments between 0.08 and 20 kbp.	25 g 100 g 250 g	35-2010 35-2020 35-2030
peqGOLD MoSieve-Agarose MS-500	Especially for high-resolution separation of small fragments (0.01 - 1 kbp).	25 g 100 g 250 g	35-3010 35-3020 35-3030
peqGOLD MoSieve-Agarose MS-1000	Especially for high-resolution separation of small fragments between 0.05 - 2 kbp.	25 g 100 g 250 g	35-4010 35-4020 35-4030
peqGOLD MegaBase-Agarose	Especially for separation of larger DNA fragments between 0.2 and 50 kbp.	25 g 100 g 250 g	35-5010 35-5020 35-5030
peqGOLD 'Pulsed Field'-Agarose	Especially for 'Pulsed Field' applications.	25 g 100 g 250 g	35-6010 35-6020 35-6030

LITERATURE

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